

**SPACE LAUNCH SYSTEM TRANS LUNAR PAYLOAD DELIVERY CAPABILITY.** A. L. Jackman<sup>1</sup> and D. A. Smith<sup>2</sup>, <sup>1</sup>NASA/MSFC Huntsville, AL 35812, [angie.jackman@nasa.gov](mailto:angie.jackman@nasa.gov), <sup>2</sup>NASA/MSFC/Victory Solutions Huntsville, AL 35812, [david.a.smith-3@nasa.gov](mailto:david.a.smith-3@nasa.gov).

**Introduction:** NASA Marshall Space Flight Center (MSFC) has successfully completed the Critical Design Review (CDR) of the heavy lift Space Launch System (SLS) and is working towards first flight of the vehicle in 2018. SLS will begin flying crewed missions with an Orion to a lunar vicinity every year after the first 2 flights starting in the early 2020's. So as early as 2021 these Orion flights will deliver ancillary payload, termed "Co-manifested Payload", with a mass of at least 5.5 mT and volume up to 280m<sup>3</sup> to a cis-lunar destination. Later SLS flights have a goal of delivering as much as 10 mT to a cis-lunar destination. This presentation will describe the ground and flight accommodations, interfaces, and resources planned to be made available to Co-manifested Payload providers as part of the SLS system. An additional intention is to promote a two-way dialogue between vehicle developers and potential payload users in order to most efficiently evolve required SLS capabilities to meet diverse payload requirements.